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10/586,636	09/11/2006	Juichi Ino	2006_0912A	6051

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WASHINGTON, DC 20006-1021

EXAMINER
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PARVINI, PEGAH

ART UNIT	PAPER NUMBER
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1755

MAIL DATE	DELIVERY MODE
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06/25/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/586,636

**Applicant(s)**

INO ET AL.

**Examiner**

Pegah Parvini

**Art Unit**

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20060719.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 2 and 3 recite "the pigment"; however, it is not clear whether "the pigment" refers to the "colored bright pigment" or the pigment in the silica-based coating film.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-5, 7-8, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 3,440,075 to Marshall.

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5. Regarding claims 1-2, Marshall teaches pigments with glass flake substrate coated with a thin layer of silver and overcoated with a translucent layer of a hydrous oxide, preferably that of silica (column 1, lines 13-18, 38-45, 62-63; column 2, lines 4-8). It is noted that claim 1 recite "optionally" forming a coating layer on the glass flake. It is, further, noted that the silver coating and the silica coating may be considered as one coating on the glass flake; therefore, Marshall reads on the limitation of claim 1 where it recites that the silica-based coated film contains a pigment. Hence, Marshall reads on the limitations of claim 2.

6. Regarding claim 7, Marshall teaches silica as the coating on the glass flake substrate.

7. Regarding claims 4-5, Marshall discloses a pigment in which the substrate or base is glass flake and onto which a coating layer of silver is formed (column 1, lines 13-18, 38-45).

8. Regarding claims 8 and 10, Marshall teaches that the disclosed pigment is used in a variety of applications such as printing inks and coating compositions (column 2, lines 12-18).

***Claim Rejections - 35 USC § 103***

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9. Claims 6, 8, and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall as applied to claims 1 and 4 above, and in view of US Patent No. 6,508,876 to Bernhardt et al.

10. Regarding claim 6, Marshall discloses a pigment comprising of a glass flake substrate over which a coating layer of silver (a pigment) is coated and onto which a further layer of silica is coated.

Marshall does not disclose that the coating layer on the substrate may also be a metal oxide.

Bernhardt et al. teaches an interference pigment with a platelet-shaped layer substrate such as glass flake substrate, and at least one coating of at least one metal oxide layer and optionally, a further layer, at least two layers comprising or consisting of colorants (column 1, lines 64-67; column 2, lines 48-50, 59-60). Furthermore, the reference discloses that titanium dioxide or zirconium oxide may be used as the metal oxide layers used to coat the substrate (column 6, lines 35-37). Additionally, Bernhardt et al. teach that an additional colorant layer is deposited as the outermost layer on the metal oxide (column 6, lines 47-50).

It is noted that Bernhardt et al. disclose that "at least" one coating of "at least" one metal may be coated on the glass flake substrate.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Marshall in order to include a metal oxide layer, such as titanium dioxide or zirconium oxide, to be coated on the glass flake substrate as that taught by

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Bernhardt et al. motivated by the fact that the disclosed interference pigment by Bernhardt et al. possesses high hiding power and more optical effects (column 1, lines 55-60); moreover, Bernhardt et al. disclose that the incorporation of small metal oxide particles or organic pigment particles into the coating brings about a marked increase in the hiding power and in the luster (column 4, lines 32-37).

11. Regarding claims 8, and 10-11, Bernhardt et al. disclose the use of the interference pigment is cosmetics, printing inks, and coatings such as glazes for ceramics and glasses (column 2, lines 12-16).

12. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall in view of Bernhardt et al. as applied to claim 1 above, and further in view of US Patent No. 6,884,289 to Schoen et al.

13. Regarding claim 3, Marshall in view of Bernhardt et al. disclose a glass flake substrate coated with silver and silica.

The references as combined fail to disclose the particle size of the disclosed pigment.

Schoen et al. disclose colored pigments based on multicoated platelet-shaped substrates, in which the substrate may be glass platelets, which comprise of different metal oxide coatings with different thicknesses; the coatings may be optional as well

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(column 1, lines 61-67; column 2, lines 1-5, 18-24, 55-67; column 3, lines 1-20; column 8, lines 38-52). The summation of the thicknesses, which may be considered the size of the final pigment particle, is 51 nm to 1600 nm (column 1, lines 61-67; column 8, lines 38-52).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Marshall in view of Bernhardt et al. in order to include the particle size of the pigment as that taught by Schoen et al. motivated by the fact that the disclosed pigment by Schoen et al. have high tinting strength which do not have pronounced goniochromaticity (column 1, lines 36-41).

The reference, Schoen et al., teach a composition having overlapping ranges of particle size with the instant claim 3. Overlapping ranges have been held to establish *prima facie* obviousness.

Therefore, it would have been obvious, at the time of the invention, to have selected from the overlapping portion of range because overlapping ranges have been held to establish *prima facie* obviousness. See MPEP § 2144.05

14. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marshall in view of Bernhardt et al. as applied to claim 1 above, and further in view of US Patent Application Publication No. 2005/0107512 to Fukuchi et al.

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15. Regarding claim 9, Marshall in view of Bernhardt et al. disclose a glass flake substrate coated with silver and silica which is used in coating compositions, cosmetics, printing inks and more.

The references as combined do not disclose a resin composition comprising the claimed pigment.

Fukuchi et al. disclose molding a resin composition containing a glittery pigment obtained by coating at least one material selected from the group consisting of glass flakes and silica flakes with at least one selected from the group consisting of a metal and a metal oxide ([0012], [0025]). Furthermore, Fukuchi et al. disclose that the metal used may be silver or other metals and the metal oxide may be silicon oxide, titanium dioxide or others ([0026], [0027]).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify Marshall in view of Bernhardt et al. in order to include the pigment in a resin composition as that taught by Fukuchi et al. motivated by the fact that this resin composition exhibit a high glitter through reflected light ([0037]).

### ***Conclusion***

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 4,867,793 to Franz et al.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pegah Parvini whose telephone number is 571-272-2639. The examiner can normally be reached on Monday to Friday 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on 571-272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

PP

  
**J.A. LORENGO**  
**SUPERVISORY PATENT EXAMINER**